

What is claimed is:

1. A fuel cell system comprising:
  - a fuel cell;
  - 5 an exhaust gas passage for allowing an exhaust gas from the fuel cell to flow through; and
    - an impurity removal member placed in the exhaust gas passage for removing impurities contained in moisture particles mixed in the exhaust gas.
- 10 2. The fuel cell system according to claim 1, wherein the impurity removal member is provided in the exhaust gas passage of a hydrogen circulation system.
- 15 3. The fuel cell system according to claim 1 or 2, wherein a gas-liquid separator is provided in the exhaust gas passage, and the impurity removal member is placed on the inside wall surface of the gas-liquid separator.
- 20 4. The fuel cell system according to claim 1 or 2, wherein a gas-liquid separator is provided in the exhaust gas passage, and the impurity removal member is placed in such a manner that a space is formed between the inside wall surface of the gas-liquid separator and the outside surface of the impurity removal member.
- 25 5. The fuel cell system according to claim 3 or 4, wherein the impurity removal member is configured so that it increases a flow resistance the closer it is to a gas outlet of the gas-liquid separator.

6. The fuel cell system according to claim 1 or 2, wherein a gas-liquid separator is provided in the exhaust gas passage, and the impurity removal member is located downstream from the gas-liquid separator.

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7. The fuel cell system according to any one of claims 1 to 6, wherein the impurity removal member is treated to make it water-repellent.

8. The fuel cell system according to claim 7, wherein a water-repellent member is placed on the outside surface of the impurity removal member.

9. The fuel cell system according to claim 7, wherein the impurity removal member is put in a container made of a water-repellent member.

15 10. The fuel cell system according to any one of claims 1 to 9, wherein an accommodating member capable of changing its shape in response to changes in the volume of the impurity removal member is provided.

20 11. The fuel cell system according to claim 10, wherein the accommodating members are distributed in the impurity removal member.

12. The fuel cell system according to claim 10 or 11, wherein the accommodating member is placed around the outside surface of the impurity removal member.

13. The fuel cell system according to any one of claims 10 to 12, wherein the accommodating member is made of a porous material.
14. The fuel cell system according to claim 10 wherein the impurity removal member is provided inside the gas-liquid separator, and the accommodating member includes an elastic member and is located at a position outside the gas-liquid flow path of the gas-liquid separator.
15. The fuel cell system according to any one of claims 1 to 14, wherein the impurity removal member contains an ion exchange resin.